Advisory Committees in OSHA and EPA: Their Use in Regulatory Decisionmaking

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Federal agencies regulating the production and use of toxic substances increasingly have utilized citizen advisory committees to help shape the form of that regulation. Both the U.S. Occupational Safety and Health Administration (OSHA) and the U.S. Environmental Protection Agency (EPA) turn to such committees for recommendations on a variety of subjects, and the advisory committee has become an especially important source of federal policy on toxic substances. Recently, the discovery of a Reagan administration "hit list" naming many members of EPA's Science Advisory Board (SAB) whose views were no longer "acceptable" raised concern about questionable political manipulation of government advisory committees in general.[1] This article examines the creation and use of advisory committees in the regulation of toxic substances in manufacturing, and suggests mechanisms to insure and improve the effectiveness and public service functions of of these and similar committees.

History and General Functions of Advisory Committees[2]

An advisory committee is a group of citizens appointed to provide input to governmental decisionmaking on a particular subject or issue. Although the U.S. government made use of citizen advisory groups even in the 1700s, widespread use of advisory committees did not occur until this century. Beginning with the administration of Theodore Roosevelt, American presidents began to rely on citizen advisory committees to assist in the formulation and implementation of federal policy. More recently, an increase in the number of regulatory agencies has been accompanied by a concomitant rise in the number of advisory committees that provide input to those agencies, especially in environmental regulation.

Awareness of increased reliance on advisory committees has elicited a mixed response from the legislative and executive branches. Concerned that advisory committees can cross the line between advice and improper influence, the U.S. Congress passed in 1972 the Federal Advisory Committee Act (FACA).[3] Although FACA embraced the advisory committee as a "frequently . . . useful and beneficial means of furnishing expert advice, ideas, and diverse opinions to the Federal Government," Congress nonetheless declared that "the need for many existing advisory committees has not been reviewed," and concluded that the creation and operation of advisory committees should be more strictly controlled.[4] Accordingly, the Act requires that new advisory committees be kept to a "necessary" minimum; that advisory committees be terminated when they have served their purpose; that the establishment, operation, administration, and duration of advisory committees be subject to uniform procedures; and that relevant information regarding advisory committees be made available to the public.

In both the present and previous administrations, the executive branch has displayed an inconsistent

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attitude toward advisory committees. The Carter administration encouraged the increased use of panels or groups of experts to solve difficult regulatory questions, but it discouraged the creation of new advisory committees. Under the Heritage Foundation's blueprint for government reorganization in the Reagan administration, the existing advisory groups are seen as essential to the missions of the EPA, but OSHA committees are criticized. To the degree that an administration regards advisory committees as extensions of the agencies they serve, such love–hate relationships may be inevitable.

Throughout its history, the advisory committee has served two general functions. First, it has provided the federal government with a means of obtaining expert advice on a wide range of issues at relatively little cost.[5] This function has been of critical importance in the regulation of toxic substances. As the federal government has endeavored to protect the public health through the control of toxic substances, it has entered into an area of complex scientific, technical, and economic decisionmaking. Advisory committees provide the expertise that such decisions require.

By providing a means through which public opinion on a particular issue can be made known to responsible officials, advisory committees also have often served a "democratic" function. For many years, however, the advisory committees used for this purpose were drawn almost exclusively from the more privileged social and economic classes, and failed to provide an accurate portrayal of public opinion. Beginning with the administration of Lyndon Johnson, the agencies have broadened the base from which advisory committees are drawn, selecting women and more representatives of divergent social, economic, and ethnic backgrounds.

Toxic Substance Advisory Committees

In the area of toxic substance regulation, the "democratic" function of advisory committees is mandated by statutory directives that such committees be "balanced" among differing points of view. However, the particular kinds of tasks assigned to these committees also affect their nature and accomplishments. Toxic substance advisory committees may satisfy one or more of the following purposes: (1) to bring needed scientific or technological expertise to the agency's decisionmaking process; (2) to provide a mechanism for reaching a consensus on difficult-to-resolve scientific or technological issues; (3) to provide a mechanism for policy guidance when traditional factual resolution of scientific or technological issues is not possible, or (4) to provide a means of expanding the participation of interested or affected parties.

A committee of technical experts addressing the toxicity of carbon monoxide or alternative ventilation technologies, for example, might be constituted to meet the first purpose. Here, if there is little real disagreement on the relevant scientific or technical issues, the committee guides the agency to the latest and best information. When scientific or technical issues are difficult to resolve—for example, on the question of whether saccharin is a human carcinogen—the advisory committee can provide a forum for technical experts and attempt to achieve consensus on what is the "best" scientific judgment.

When the "factual" resolution of a scientific or technological issue is not possible in the traditional sense, the advisory committee provides a mechanism for policy guidance. This category encompasses many important issues in toxic substance regulation, such as the extrapolation of animal test data to humans; the interpolation of high-dose data to low-exposure conditions; the usefulness of short-term *in vitro* tests for assessing carcinogenicity; the reversibility of cell transformation induced by carcinogens; the distinction between benign and malignant tumors; and the prediction of technological innovation in response to regulation. Here, in the absence of satisfactory concrete scientific evidence, the final regulatory decision in each case must be based upon certain assumptions that concern science but are grounded in social policy determinations.[6] If no evidence exists to link a substance's carcinogenicity in animals to cancer in humans, then an advisory committee renders policy advice whenever it recommends permissible human exposure levels for that substance. Such a recommendation, although (presumably) guided by the animal data, rests ultimately on a balancing of social attitudes toward risk and utility, rather than on a mechanical evaluation of technical data.

Finally, in its most "democratic" sense, an advisory committee can facilitate the participation of interested parties in the regulatory decisionmaking process. This participation serves the po-

litical purpose of fair representation and could defuse subsequent adversary interactions. By raising the consciousness of technical experts to alternative views, the advisory committee system may also facilitate the entry of technical people into the regulatory agencies as permanent or "rotator" staff.

When scientific judgment is subject to prejudices and bias, or where difficult judgment calls vary widely and where divergent but not clearly incorrect points of view exist, the distinction so clearly shown in these functions—between fact-finding and fair process—begins to blur. As federal appellate courts have indicated in their review of OSHA cases, issues on the frontiers of scientific knowledge are not factual determinations in the usual sense; rather, they are decisions of social policy, and are legislative rather than judicial in character.[7] As advisory committees are deeply immersed in policy issues, the importance of composition that includes a variety of opposing viewpoints increases, lest committee policies serve only a narrow set of interests.

Table 1. U.S. toxic substances advisory committees.[a]

	OSHA		EPA	
Permanent	NACOSH		SAB	
Quasipermanent				ATSAC
Ad hoc		Specific standards committees		
Policy-oriented	X	X		X
Science/technology		X	X	
Balanced	X	X		X
Expert only			X	

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The Legal Framework for OSHA and EPA Advisory Committees

As noted above, the Federal Advisory Committee Act sets forth general guidelines and procedures applicable to all federal advisory committees. Not only does the Act require open meetings, detailed transcripts, a limited right of public participation, and the attendance of a federal government representative at advisory committee meetings, but Sections 5(b)(2) and 5(c) also state that committee membership should be "fairly balanced in terms of points of view represented and the functions to be performed." The recommendations of an advisory committee are, except where otherwise specifically authorized by statute, to be "advisory" only. More specific language dealing with toxic substances committees occurs in the Occupational Safety and Health Act (OSH Act) and in the Environmental Research, Development, and Demonstration Authorization Act of 1978 (ERDDA).[8] In addition, EPA's Office of Toxic Substances has created an advisory committee. These advisory committees and subcommittees (see Table 1) fall into three general categories: *"permanent" advisory committees* created by statute to advise agencies on science, technology, or general policy issues; *"quasipermanent" committees*, usually created administratively, to advise agencies on science, technology, or general policy issues; and *"ad hoc" committees*, created either by statute or administratively, to advise agencies on a *specific* issue of science, technology, or policy.

Section 7(a) of the Occupational Safety and Health Act establishes a mandatory, permanent, "balanced" advisory committee known as the National Advisory Committee on Occupational Safety and Health (NACOSH) to advise the Secretary of Labor and the Secretary of Health and Human Services on general issues pertaining to the administration of the OSH Act. The committee's twelve members are drawn from management, labor, occupational safety and health professionals, and the public, and are selected "upon the basis of their experience and competence in the field of occupational safety and health." NACOSH is required to hold no fewer than two meetings during each calendar year.

In addition, the OSH Act makes provision for the creation of limited-lifetime, "balanced," *ad hoc* advisory committees to consider specific subjects related to the setting of occupational standards. The authority for such committees is found in Section 7(b) of the Act, which empowers, but does not require, the Secretary of Labor to appoint special advisory committees "to assist him in his standard-setting function under Section 6." Each of these committees is to have no more than fifteen members, and is to be balanced equally between "persons qualified by experience and affiliation to present the viewpoint of the employers

involved" and "persons similarly qualified to present the viewpoint of the workers involved." In addition, an *ad hoc* committee must include at least one representative of a state health and safety agency, and may include other persons "who are qualified by knowledge and experience to make a useful contribution," as long as the number of such representatives does not exceed the number from federal or state agencies.

Although the Environmental Protection Agency established a Science Advisory Board (SAB) administratively in 1974, that Board was subsequently established by statute in the Environmental Research, Development, and Demonstration Authorization Act. The original Board consisted of five standing committees and an executive committee. Under the Reagan administration, however, the EPA reduced the number of standing committees to three. By statute, these committees are to meet periodically with the EPA Administrator "to provide advice . . . on the scientific and technical aspects of environmental problems and issues." Their membership is to be "a body of independent scientists and engineers of sufficient size and diversity to provide a range of expertise required to assess the scientific and technical aspects of environmental issues,"[9] and additional *ad hoc* committees may be drawn from the members.

EPA's regulation of toxic substances is also assisted by an administratively created advisory committee known as the Administrator's Toxic Substance Advisory Committee (ATSAC). This quasipermanent, "balanced" committee focuses primarily on issues of policy rather than issues of science. According to its charter, ATSAC is to advise the EPA "on policy, technical and procedural matters relating to the environmental, economic, and social aspects" of implementing the Toxic Substances Control Act (TSCA), and to "consider and comment on proposals for rules and regulations." However, the committee is directed to "generally defer" on scientific matters to the Science Advisory Board. The committee's sixteen members are to be drawn, "in appropriate balance," from three groups: (a) manufacturers, processors, and users of chemical substances; (b) environmental, health, and public interest organizations; and (c) other interested parties, "including, but not limited to, labor organizations, professional societies, and state and local interests." The committee is also authorized to form *ad hoc* subcommittees to deal with specific issues. ATSAC itself must hold from three to six meetings a year; the subcommittees are directed to meet "as needed."[10]

In addition to scientific and technical competence being represented in the committees themselves, both ATSAC and NACOSH typically request outside experts to address them on technical issues. Through these means, education of the committees is a continuing event. The SAB rarely operates in this manner.

Advisory Committee Performance

In general, advisory committees play a constructive role in developing regulatory policies for toxic substances. Members have usually been knowledgeable, and the deliberations valuable and instructive. All things considered, they have dealt well with the science and technology questions presented to them.

OSHA's twelve-member permanent committee, NACOSH, has been a major forum for discussing and clarifying controversial issues before unnecessary adversarial interactions occur. For example, NACOSH investigated the idea of adopting a generic cancer policy long before OSHA promulgated any formal rule. The committee served as an intellectual testing ground, and a review of its public transcripts reveals penetrating discussions of difficult questions on the science–law interface. Reproductive hazards were discussed with sophistication, and even internal "administrative" issues, such as research needs and opportunities and agency effectiveness, were addressed.

The *ad hoc* standard-setting committees have proved somewhat less integral to the OSHA process. An *ad hoc* committee is not always—in fact, usually is not—appointed as part of the standard-setting procedure. When a committee has been appointed, OSHA's response to committee recommendations has been mixed. On some occasions (for example, the coke oven emissions standards), OSHA has taken the committee's advice and based a standard on the recommendations. On other occasions, such as the early experiences with pesticide exposures, the agency has departed widely, and vigorously, from committee recommendations.

OSHA's reticence in utilizing standard-setting committees may stem, in part, from their transitory nature. Although the ability to appoint separate committees for different standards provides desirable flexibility on scientific and technical

issues, it may be less than desirable for developing uniform policy and may lead to an uneven approach to standard-setting. A solution might lie with the appointment of a core of "standing" members who would serve on all *ad hoc* committees.

Unlike OSHA, EPA does not receive general policy advice on toxic substances from a broadly focused permanent committee. Its main advisory body, the Science Advisory Board, is concerned primarily with issues of science and technology rather than issues of policy. On issues related specifically to the implementation of the Toxic Substances Control Act, however, EPA regularly receives advisory committee recommendations on toxic substance policy from the Administrator's Toxic Substance Advisory Committee (ATSAC).[11] ATSAC has monitored the ongoing implementation of TSCA, and has addressed, among other issues, regulatory strategies for new and existing chemicals, testing rules, and the relationship between regulation and innovation in the chemical industry. Because EPA has taken no significant regulatory action (other than on PCBs) under TSCA, ATSAC's effectiveness is yet to be tested. Analysis of its transcripts, however, reveals intelligent, probing discussions that closely parallel those held by NACOSH. One striking feature of ATSAC is the presence on the committee of both environmental lawyers and scientists.

Because ATSAC must defer to the Science Advisory Board on technical issues, EPA's science advice in the area of toxic substances comes from the SAB. Here, in contrast to OSHA's standard-setting committees, *ad hoc* committees are drawn from the larger SAB membership, thus providing both flexibility and continuity. Although the board is charged with the responsibility for technical issues, it often deals with issues which touch on policy as well. In a broad sense, its activities are to include the review of EPA programs and strategies, the review of the scientific basis of proposed criteria documents, standards, limitations, and regulation, and the recommendation of new standards and programs. EPA records indicate that SAB activities in 1979 focused mainly on analyses of the scientific bases of proposed standards, on evaluations of the health effects of particular toxins, and on general issues of evaluation methodology and environmental modeling. EPA described the activities relevant to TSCA as follows:

> Analysis of the scientific data bases now in existence and new ones required for implementation of the Toxic Substances Control Act (TSCA) is the continuing activity of a permanent subcommittee. The subcommittee also is analyzing the potential of current and planned EPA research to provide necessary support for TSCA.[12]

Based on their performance to date, advisory committees appear to have the potential to make significant contributions to decisions on toxic substance regulation. Their chief contribution may lie in their facility to integrate and distinguish questions of science and questions of policy because transcripts of the NACOSH and ATSAC meetings reveal a growing conviction that uncertainty in science or technology does not preclude effective regulatory response to a problem. Naturally enough, however, committee members disagree about the type of response. Accordingly, the most heated committee discussions have centered on issues of policy, not science, even where the science has been uncertain.

The Fair Balance Issue[13]

Analysis of the legislative and administrative history of the adoption of the statutory requirement for fair balance suggests that it was intended to achieve the following objectives: (1) to increase the numbers of "individuals affected by agency action" as participants on advisory committees; (2) to avoid overrepresentation of a particular geographic region, university, industry, company, or discipline on any advisory committee; (3) to include more consumers and representatives of public interest groups as members, in an effort to balance industry representation; (4) to include more "nonexperts" (i.e., lay people) as members, but to ensure that they are interested and knowledgeable; and (5) to preclude a domination of the committee by any one viewpoint or interest that might give some private concerns special access to public policymakers.[14]

If there is a great potential for improving the regulatory process through the use of advisory committees, a similar opportunity exists for subverting that process through their misuse. Governments have sometimes used advisory committees for little more than implementing a decision made before the committee was estab-

lished, either by appointing members who will merely "rubber stamp" government decisions, or by appointing influential community leaders whose support is needed for implementation of a government decision.[15] Until recently, OSHA and EPA appear to have avoided such blatant manipulation. OSHA has now replaced eleven of the twelve members on NACOSH, however, and EPA has retired practically all of its sixty SAB members, many who were on the previously mentioned "hit list."[16] Thus, even though the scientific experts may, as individuals, be protective of their professional standing, manipulation of advisory committees is possible by appointment of only "acceptable" members.

The key to such misuse is an agency's circumvention of the requirement of Section 5 of FACA that advisory committee membership be "fairly balanced in terms of the points of view represented." Although some observers have expressed doubt over the meaning of this provision,[17] the statute's plain language and the relevant legislative history give fairly clear signals of its intentions.[18] Fairness demands more than a token representation of an opposing viewpoint. The statute clearly anticipates a good faith effort at parity.[19] The Second Circuit Court of Appeals, echoing language found in the House of Representatives Committee Report explaining Section 5, has indicated that the provision's underlying purpose is to prevent any one point of view from "dominating" the consideration of an issue.[20] It should be realized that, of course, in advisory committee deliberations, consensus-building for policy recommendations generally avoids domination by a bare majority. To be effective, heavy consensus is required, and thus, unless the committee is heavily stacked, some imbalance is tolerable.[21]

In formulating an operational definition of "balance" to meet the FACA requirements, three criteria are suggested: competence, discipline, and bias/allegiance.[22] Balance in the effectiveness of technical argument surely requires equivalent *competence* or expertise among antagonists, yet experts as a group may need to be tempered by the participation of nonexpert members. Each *discipline* carries its own paradigmatic bias, and both nonexperts and several disciplines should be represented, the mixture depending on the committee's agenda or purpose. Finally, political, institutional, ethnic or sexual *bias or allegiance* should be adequately "balanced." Most of the attention in addressing the fair balance requirement seems to have been focused on this last criterion.

"Competence" Balance

Balance in the effectiveness of technical argument requires equivalent technical *competence* among those members who differ with regard to political or policy matters, and this, in turn, presupposes equivalent commitment to utilize that competence in fulfilling committee responsibilities. One of the easiest ways for an agency to secure a committee's adoption of a particular position is to appoint less-than-competent or uncommitted members to represent opposing positions. In addition, as one commentator has noted, committees may be stacked with "distinguished" members rather than those whose competencies relate to the agenda.[23]

Disciplinary Balance

A committee composed entirely of scientists is clearly not balanced between experts and nonexperts, but it also may not be balanced among technical *disciplines*, thereby masking a source of consistent bias. Asked by an agency, for example, to develop exposure standards for a chemical on which the evidence of human carcinogenicity is conflicting, scientists will tend to take a "conservative" posture. Inclined by both training and experience to adopt a "wait and see" attitude or to call for further study, these members might decline to express a position on carcinogenicity until more conclusive evidence is available. An agency that desires a conservative position on a question of toxic substance *policy* therefore stands a better chance of securing that position by submitting the issue to a purely *scientific* committee.

As a general rule, the more the issues facing an advisory committee are policy-related, the more its objectivity in considering those issues will depend on the degree to which committee membership is balanced on all relevant factors. Lack of balance among scientific subspecialties, however, can also affect the consideration of largely *scientific* issues. Suppose that an advisory committee is asked to evaluate the carcinogenic risk posed by exposure to vinyl bromide. Those scientists whose general research involves animal

studies of carcinogenicity may view the risk differently than epidemiologists who study patterns of disease among humans or those scientists who develop short-term tests for mutagenicity for predicting carcinogenicity. Disciplinary bias can greatly affect the "scientific" determination of carcinogenicity because one kind of evidence may carry more weight than another.

Among toxic substance advisory committees, the EPA's Science Advisory Board is conspicuous for its lack of disciplinary balance. To the extent that the SAB delves into policy matters—such as recommending standards or assessing risk–benefit methodologies—this imbalance may pose a potentially serious problem. In part, the imbalance is the result of SAB's Congressional mandate. The enabling statute, ERDDA, specifies that SAB membership be drawn from persons "qualified by education, training, and experience to evaluate scientific and technical information on matters referred to the Board,"[24] a mandate that would appear to exclude nonscientists. The language does not, however, obviate the other balancing requirements of FACA. Rather than continuing to restrict membership to "scientists and engineers," EPA should properly seek a membership that represents a fair balance of other disciplines meeting the statutory criteria of technical competence. In addition, the SAB must be balanced on all relevant factors of bias or allegiance and competence.

Congress recently had the occasion to reaffirm its intention that FACA be applied to the SAB. An EPA appropriations bill, repeating the language of FACA, specifically required SAB membership to be "fairly balanced in terms of points of view represented" and required that such balance be achieved through the inclusion of members representing "the states, industry, labor, academia, consumers, and the general public."[25] On 22 October 1982, Ronald Reagan vetoed the bill and gave his objections to these requirements as the major reason.[26] In his veto message he stated:

> . . . This requirement runs counter to the basic premise of modern scientific thought as an objective undertaking in which the views of special interests have no role. The purpose of the Science Advisory Board is to apply the universally accepted principles of scientific peer review to the research conclusions that will form the basis for EPA regulations, a function that must remain above interest group politics.
>
> In addition, under the statutes governing actual promulgation of EPA rules, the Administrator is obligated to seek public comment from any and all interested parties and to weigh such comment in shaping final rules. That is the stage of the rulemaking process at which involvement of special interest viewpoints is appropriate, not the earlier stage of developing a sound scientific understanding of the research findings that may be relevant to a particular rulemaking or class of rules.[27]

Such a viewpoint assumes that only "neutral" scientists are appropriate, and further assumes that such persons exist.[28]

Despite the Presidential veto, Congressional efforts to achieve a fair balance on the SAB continue. Reportedly, the issue will be the subject of public hearings during the Fall 1983 session of Congress.[29]

"Bias/Allegiance" Balance

Balancing must also be achieved in the bias and allegiance of committee members. Although, broadly speaking, we are all affected by toxic substances regulation, some persons are more directly affected than others. Accordingly, FACA's legislative history indicates that the Act requires that industry representatives on a committee be balanced by representatives of the environmental movement.[30] Indeed, FACA's Section 5(b)(3) requires that "appropriate provisions" be taken to

> ensure that the advice and recommendations of the advisory committee will not be inappropriately influenced by the appointing authority or by any special interest, but will instead be the result of the advisory committee's independent judgment.

FACA also acknowledges several general "bias" criteria, such as political orientation, institutional affiliation, race, sex, and geography. This aspect of the balancing requirement would appear to insulate advisory committee members from "political" removal, and might require a degree of membership continuity from administration to administration.

Perhaps because of Section 5(b)(3), bias and allegiance have received the greatest attention in agency efforts to balance committee membership. But such balancing may have been perfunctory. For example, one commentator reports that evaluations of prospective committee member's potential allegiances have usually not considered sources of employment, grants, and contracts.[31]

Given the potentially large number of relevant factors on which balance must be achieved, compliance with the fair balance requirement will sometimes be difficult. For scientific and technical advisory committees, the requirement of technical competence also narrows the pool of candidates from which the other relevant criteria must be satisfied. Mere difficulty, however, does not excuse noncompliance. If toxic substance advisory committees are truly to exercise the "independent judgment" that FACA requires, OSHA and EPA must be forthright and diligent in their efforts to achieve proper committee balance.

Fair balance alone will not insulate advisory committees from misuse. An agency may avoid *ad hoc* committees, for example, by merely failing to establish them. An agency may reduce the size of advisory committees, reduce their funding, or hold meetings only infrequently. It may refuse to cooperate with the committees by denying them timely access to agency records or personnel. And, of course, it may always simply ignore advisory committee recommendations. In each of these cases, however, the agency's antagonism toward the advisory committee will be more or less obvious. Only the lack of fair balance will enable an agency to subvert the advisory committee process while still *appearing* to be using it properly. It is this criteria, then, that merits special attention both by the public and by policy analysts.

Recommendations for Improving the Effectiveness of Toxic Substance Advisory Committees

To be effective, an advisory committee must not only provide objective, intelligent, and thoughtful advice to the agency, but the agency must also give due consideration to that advice, and to the advisory committee process, in the formulation of its regulatory policies. To achieve that effectiveness, advisory committees must satisfy several criteria. First, of course, they must have a balanced and committed membership. The committee must be provided the necessary independence within which to pursue its work, must be given adequate financial support, and must receive the full support and cooperation of its parent agency. And there must be a strong and independent chairperson to shepherd the advisory committee through its sensitive work. The absence of any one of these factors can render an advisory committee little more than an empty bureaucratic exercise.

The OSHA and EPA advisory committees discussed here would benefit from attention to each of these items. Aside from the fair balance issues, frequency of committee meetings, cooperation in agenda-setting, and continuity and longevity of committee membership should be considered. Ongoing advisory committees need to meet, on the average, every six weeks to two months if they are to consider the issues adequately. Currently, most toxic substance committees meet less frequently. NACOSH, for example, has met only twice in the twelve months preceding completion of this study.

Committee agendas are a critical factor, as well. If advisory committees have insufficient autonomy to determine the issues they will consider, important issues may be overlooked, and the advisory committee may cease to function as an independent body. Furthermore, interested, activist members may leave the committee in frustration. This is not to say that agenda-setting should be left solely to the committee. Rather, good faith cooperation between the agency and the committee will be the key to identifying those issues that should appear on the agenda.

Continuity is also an important factor. As members serve together on a committee, they build a personal relationship that can transcend individual political and disciplinary biases and help them to work more objectively and effectively toward the public interest. Thus, while the establishment of an "old boy" (or "old girl") network should be avoided, both OSHA and EPA should be more judicious in their replacement of advisory committee members. In addition to conflicting with the fair balance requirement, wholesale "political" replacements will serve only to lessen advisory committee effectiveness.

President Reagan's veto of a specific balancing requirement for the SAB was supported by both the National Academy of Sciences and the American Association for the Advancement of Science.[32] This support, in light of the history of the EPA "hit list," suggests that, driven by the desire to maintain the *illusion* of neutrality of science and scientists, the scientific community may, as a practical matter, prefer covert stacking to overt balancing. How, then, can such stacking and imbalance be avoided? If overt balancing cannot be maintained, an alternate course may be to require all advisory committee members to disclose not

only their current professional affiliation but also their present and past consulting arrangements and other activities.[33] Full disclosure, at least, will let the public know more about the composition of a particular committee.

In the final analysis, the effectiveness of advisory committees may well depend on the degree to which their use is subjected to public scrutiny. The Federal Advisory Committee Act, the Federal Open Meetings Act, and the Freedom of Information Act all provide mechanisms through which citizens can monitor advisory committee proceedings. And legal channels are available to check agency abuse of the advisory committee process. Use of these channels, however, demands close attention to the details of administrative law. Legal challenges to arguably "unbalanced" advisory committee memberships have failed, for example, because the party mounting the challenge did not object to the unbalanced nature of the committee when it was originally constituted.[34] Continued and spirited citizen monitoring of advisory committees may therefore be a necessary predicate to legal action. Only with the help of a watchful citizenry and a concerned Congress can advisory committees fulfill their potential to serve the public interest.

Notes

1. See, for example, Howard Kurtz, "EPA Removed More than 50 Scientists on Conservative 'Hit List,'" *The Washington Post* (2 March 1983): A2; Eliot Marshall, "Hit List at EPA?" *Science*, Volume 219, Number 4590 (18 March 1983): 1303; "EPA 'Hit List' Fuels Agency Controversy," *Chemical and Engineering News*, Volume 61, Number 10 (7 March 1983): 5.
2. Detailed discussions of advisory committee history can be found in Clementine L. Kaufman, "A Sociohistorical View of Advisory Committees," unpublished, prepared for Charles F. Kettering Foundation Conference on Federal Advisory Committees (June 26, 27, 1981); Michael H. Cardozo, "The Federal Advisory Committee Act in Operation," *Administrative Law Review*, Volume 33, Number 1 (1981); and Richard A. Wegman, "The Utilization and Management of Federal Advisory Committees" (Charles F. Kettering Foundation, 1983).
3. 5 U.S.C. App. I.
4. 5 U.S.C. App. I, Section 2.
5. See Cardozo, *op. cit.*, p. 51: "[The alternative cost of outside consultants] would far exceed the current expenditures for travel and per diem of all the members of advisory committees."
6. For a discussion of the distinction between science and science policy determinations in the evaluation of formaldehyde's carcinogenicity, see Nicholas A. Ashford, C. William Ryan, and Charles C. Caldart, "A Hard Look at Federal Regulation of Formaldehyde: A Departure from Reasoned Decisionmaking," *Harvard Environmental Law Review*, Volume 7, Number 2 (1983): 297.
7. See *Industrial Union Department, AFL-CIO v. Hodgson, 499 F.2d 467 (D.C. Cir. 1964):*

   > *. . . some of the questions involved . . . are on the frontiers of scientific knowledge, and consequently as to them insufficient data is presently available to make a fully informed factual determination. Decision making must in that circumstance depend to a greater extent upon policy judgments and less upon purely factual analysis.*

   See also *Society of the Plastics Industry, Inc. v. OSHA*, 509 F.2d 1301, 1308 (2nd Cir. 1975).
8. OSH Act: 28 U.S.C., Sec. 651, *et. seq.*; ERDDA: 42 U.S.C., Sec. 4351a, *et. seq.* The SAB was created by Sec. 4365.
9. United States Environmental Protection Agency, Advisory Committee Charter, Science Advisory Board (19 October 1979), as found in EPA, "U.S. Environmental Protection Agency Advisory Committees: Charters, Rosters, and Accomplishments" (January 1980): 30–32; quotations are from paragraphs 3 and 4.
10. United States Environmental Protection Agency (EPA), Advisory Committee Charter, Administrator's Toxic Substances Advisory Committee (22 November 1979), as found in EPA, "U.S. Environmental Protection Agency Advisory Committees: Charters, Rosters, and Accomplishments" (January 1980): 1–2; quotations are from paragraphs 2, 3, and 4.
11. EPA may also receive regular policy advice from advisory committees created to assist its implementation of the Clean Air Act and the Federal Insecticide, Fungicide, and Rodenticide Act. The activities of these committees are beyond the scope of this article.
12. EPA, "U.S. Environmental Protection Agency Advisory Committees: Charters, Rosters, and Accomplishments" (January 1980): 39–40.
13. For a legal history of the fair balance requirement, see Wegman, *op. cit.*, pp. 180–191, and Cardozo, *op. cit.*, p. 15.
14. See Wegman, *op. cit.*, p. 185.
15. See, e.g., Kaufman, *op. cit.*, pp. 6–7.
16. See note 1 above. At the hearings of the House Committee on Science and Technology, Subcommittee on Natural Resources, Agricultural Research and Environment, on 19 March 1982, EPA Ad-

ministrator Anne Gorsuch was asked by Congressman James H. Scheuer why she had replaced most of the SAB members. She referred the question to Deputy Administrator John Hernandez who replied, "our plans are not to appoint them because we believe there are a lot of people with equal abilities in the field." [Fiscal Years 1983 and 1984 Environmental Protection Agency Research and Development Authorization, 97th Congress, 2nd Session 124 (1982): 220–221.]

17. See Cardozo, *op. cit.*, p. 55: "Doubt has existed . . . whether this means that various political, ethnic, geographic, educational, and societal points of view are to be represented, or that the members should have a balance of relevant training, experience and professional competence." For a similar viewpoint, see Kit Gage and Samuel S. Epstein, "The Federal Advisory Committee System: An Assessment," *Environmental Law Report*, Volume 7 (1977): 5001 and 5004: "Must a committee be divided evenly by interest sectors or is one member, with a viewpoint different from the majority, sufficient to balance a committee?"
18. See the text accompanying note 14 above.
19. Responsibility for advisory committees now rests with the General Services Administration (GSA). An interim rule issued by GSA requires that the agency consider for membership: "a cross section of interested persons and groups with demonstrated professional or personal qualifications or experience to contribute to the functions and tasks to be performed."

    The rule also provides that other persons may be considered for membership, "where such participation is necessary to obtain divergent points of view that are relevant to the business of the advisory committee." 48 *Federal Register* 19328 (23 April 1983), §101-6.1007(a)(2)(iii).
20. In *National Nutritional Foods Association v. Califano*, 603 F.2d 327 (2nd Cir., 1979), an industry group challenged the composition of an advisory committee convened to provide recommendations on the question of whether consumer warnings should be placed on packaged dietary supplements. The plaintiff argued that the committee, which was comprised solely of physicians, was in violation of the fair balance requirement. Although the Second Circuit upheld a federal district court's dismissal of the suit on procedural grounds, it was nonetheless sympathetic to the fair balance issue. Noting that physicians were "understandably leaning in favor of medical supervision of the use of protein supplements to conquer obesity" (603 F.2d at 334), the court declared that the committee's unbalanced nature "directly implicates the concern Congress addressed in Sec. 5(b)(2) and (3) of the Act, that agency action might be dominated by one particular viewpoint" (603 F.2d at 336). This language is similar to that found in the committee report explaining the House version of the bill, from which Section 5 was drawn. That report points to "the danger of allowing special interest groups to exercise undue influence upon the Government through the dominance of advisory committees," and indicates that Section 5 was intended to prohibit both a "lack of balanced representation of different points of view" and a "heavy representation of parties whose private interests could influence their recommendations" [HR 92-1017, 92nd Congress, 2nd Session, 1972, as found in *U.S. Code Congressional & Administrative News*, 92nd Congress, 2nd Session, 3491, 3496 (1972)]. Discussions of the relevant legislative history can be found in Cardozo, *op. cit.*, p. 15; Wegman, *op. cit.*, pp. 180–185; and Richard A. Wegman and David P. Lambert, "Report on Federal Advisory Committees: Background and Summary of Significant Findings and Recommendations," unpublished (15 March 1982), p. 25. A recent decision of the United States District Court for the District of Columbia, *National Anti-Hunger Coalition v. Executive Committee of the President's Private Sector Survey on Cost Control*, 557 F.Supp. 529 (D.D.C. 1983), suggests that an agency may be able to narrow the applicability of the fair balance requirement by narrowing the *issue* to be considered by the advisory committee. The court appears to have held that if the issue is narrow and "technical" enough to permit proper resolution without resort to the fair balance requirement, that requirement becomes meaningless. This rationale appears inconsistent with the language and history of FACA, and the case is presently on appeal to the United States Court of Appeals for the District of Columbia (Docket Number 83-1248). The ultimate impact of the district court opinion is thus not yet known. Nonetheless, as the subsequent discussion in this article indicates, the issues before toxic substances advisory committees will rarely, if ever, be so narrow and technical as to warrant a suspension of fair balance.
21. The *wholesale replacement* of advisory committee members on the SAB suggests that the replacement may have resulted in stacking.
22. These three "balance" criteria suggested by the author are also discussed in an unpublished report on advisory committees prepared by a team of consultants to the Charles F. Kettering Foundation. See *Criteria for the Selection of Advisory Committee Members*, C.F. Kettering Foundation, 20 August 1981.
23. Kaufman, *op. cit.*, p. 17.
24. 42 U.S.C., Sec. 4365.
25. H.R. 6323, Sec. 6(b)(2), 97th Congress, 2nd Session (18 May 1982).

26. R. Jeffrey Smith in *Science*, Volume 218, Number 4573 (12 November 1982): 663.
27. Ronald Reagan, Veto Message of S.2577, 22 October 1982.
28. Interestingly, the Reagan veto was urged both by Frank Press, President of the National Academy of Sciences (letter from Frank Press to George A. Keyworth, Science Advisor to the President, 25 October 1982), and William D. Carey, Executive Officer, American Association for the Advancement of Science (letter from William D. Carey to George A. Keyworth, 22 October 1982).
29. Personal communication with the Legislative Staff of the U.S. House of Representatives, Subcommittee on Natural Resources.
30. The House committee report on FACA, cited above in note 20, makes specific mention of the activities of the Advisory Committee on Federal Reports, which had met with government officials to discuss a "national industrial wastes inventory questionnaire." As noted in the committee report, "only representatives of industry were present" at the meeting. The report decries the lack of "representatives of conservation, environment, clean water, consumer, or other public interest groups" at the meeting, and indicates that such an imbalance would be prohibited by FACA.
31. Gage and Epstein, *op. cit.*, p. 5004.
32. See note 28 above.
33. This compromise was discussed at a recent roundtable discussion of EPA regulatory policy; see "Examining the Role of Science in the Regulatory Process," *Environment*, Volume 25, Number 5 (1983): 6.
34. The need for diligence in seeking to enforce FACA is illustrated by the plight of the plaintiff in *Physicians' Education Network, Inc., v. The Department of Health, Education and Welfare*, 653 F.2d 621 (D.C. Cir., 1981). The Physicians' Network, representing a group of ophthalmologists, challenged the composition and activities of an advisory committee that had recommended an extension of Medicare reimbursement to eye care performed by optometrists. Without reaching the question of whether the allegations were sufficient to raise an issue under FACA, the court held that the Physicians' Network lacked the requisite "standing" to maintain the lawsuit because it had failed to object to the alleged FACA violations before the issuance of the report:

> Physicians' does not allege that it sought and was denied participation in the panel's meetings, or that it sought and was denied representation on the panel itself. Allegations of this kind have been found sufficient in other cases to support standing to invoke the provisions of the Federal Advisory Committee Act against an agency. Far from acting promptly, Physicians' did not sue until October 1979, more than three years after the report was delivered to Congress in July 1976. [653 F.2d at 623]

See also *National Nutritional Foods Association v. Califano, supra* at note 20; *Metcalf v. National Petroleum Council*, 553 F.2d 176 (D.C. Cir. 1977); *Center for Auto Safety v. Tiemann*, 414 F. Supp. 215, 220 (D.D.C., 1976); remanded on other grounds, 580 F.2d 689 (D.C. Cir. 1978); *Nader v. Baroody*, 396 F. Supp. 1231–1232 (D.D.C., 1975).